

# AMERICAN BEE JOURNAL



GEORGE W. YORK,  
Editor.

CHICAGO, ILL., JULY 4, 1901.

FORTY-FIRST YEAR  
No. 27.

WEEKLY



MR. TOFIELD LEHMAN HIVING A SWARM ON THE RASPBERRY  
BUSHES.—(See page 418.)

# THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

**GEORGE W. YORK & COMPANY**

144 &amp; 146 Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

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PROF. A. J. COOK, }

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To prevent the adulteration of honey.  
To prosecute dishonest honey-dealers.

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## Weekly Budget.

F. MEHRING, of Germany, the inventor of comb foundation, is also the first one who ever transferred larva. He described the method and his experience minutely in the Dorf-Zeitung for 1866.—Gleanings in Bee-Culture.

DR. C. C. MILLER, of McHenry Co., Ill., wrote us as follows, June 25:

Yesterday the 100 degree mark was reached, which is just the thing for bee-weather, only we need rain. We started in the season with a shortage, and have never caught up. Red clover leaves curl up with the drouth.

MR. R. V. GOSS, of Jasper Co., Ala., has sent us a picture of his home bee-yard, called "Wildwood Apiary," which will be found on page 426 of this number. Mr. Goss keeps bees for pleasure, preferring them to horses, dogs, etc. The people seen in the engraving are Mr. Goss and his two little "queens"—Mabel and Lois.

W. WANKLER, of Germany, makes the claim in L. Bienenzeitung, 1893, page 112, to have invented and used an implement of his own for measuring bees' tongues, in 1882. He says he exhibited the same at a bee-keepers' meeting and exhibition in Frankfurt, in 1883, where he sold the instrument to Frank Benton.—Gleanings in Bee-Culture.

EDITOR E. R. ROOT is at present doing his work on the fly, and at long range. He is a progressive editor, making a progress of a good many miles some days through the "South countree." He complains that a 40-mile rate of speed on a railroad with its accompanying lurches is not conducive to straight writing, but the lines in Gleanings in Bee-Culture appear straight enough.

MR. TOFIELD LEHMAN, of Fayette Co., Iowa, besides being a bee-keeper, is also an amateur photographer. On the first page of this issue, as well as on page 421, will be found samples of his own work.

He began to keep bees in 1892, and has been quite successful during all that time. His bees have been working wonderfully well lately, white clover being plentiful. He looks for a good crop of honey this season.

MR. J. M. RANKIN, the new foul-brood inspector of Michigan, is an energetic sort of chap—one who is bound to succeed in his work. The Bee-Keepers' Review has this to say concerning him: ☐ ☐ ☐ ☐ ☐

☐ He has nearly completed a course at the Michigan Agricultural College, working his way through, turning a penny in any way that was honorable, even if not always so pleasant.

☐ He was one of the first, if not the first, to call attention to the difference in length of the tongues of different strains of bees, and to urge the breeding of bees with this end in view.

He is very enthusiastic in his work of fighting foul brood; so enthusiastic that, when called away last year to help in its extermination in distant apiaries, he would go out moonlight nights and shake off the bees, so as to avoid trouble from robbers. A man that will do that is going to "get there." It is in this enthusiasm that I build my hopes.



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Or, Manual of the Apiary.

—BY—

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ESTABLISHED IN 1861

THE OLDEST BEE-PAPER IN AMERICA

41st YEAR.

CHICAGO, ILL., JULY 4, 1901.

No. 27.

## Editorial.

**1000 Members** in the National Bee-Keepers' Association! Are you one of that "ten hundred?" If not, now's your chance to be counted in the *first thousand*. Read on.

The National Association of bee-keepers meets this year at Buffalo, N. Y., Sept. 10, 11 and 12—only a little over two months from now. We have just learned that the Association at present has a membership of about 800. We have long felt that it ought to have at least 1000 good and true bee-keepers on its membership roll. Why not make it that number by the time of the Buffalo convention? It could very easily be done, and in this way:

Let each of over 200 of the host of readers of the American Bee Journal who are not now members, send to us his or her dollar before Sept. 1, and the thing will be done. Don't wait until the last week of August to do that, but send the dollar to us *now*. Upon its arrival here we will forward it to Mr. Secor, the treasurer, who will mail you a receipt therefor.

It seems to us that this ought to be done. Is it impossible to have a national organization of bee-keepers in this country with a membership of 1000? If so, we are done with the whole thing. But we believe *it can be done*. We are certain that with the matter placed properly before the readers of the American Bee Journal alone, at least 2000 of them would be glad to join the National Bee-Keepers' Association, and thus aid by their influence and dollars the cause in which they are so much interested.

We will begin to publish a list of names of all who send us their membership dues, beginning next week (provided any come in by the time our next issue goes to press), and will continue to do so until the 1000 membership is secured, or at least until the time of the Buffalo convention. We have faith enough to believe that there are plenty among those who read these lines to raise that membership roll above the 1000 mark. Is our faith too strong? Wait and see—*after you have sent us your dollar*.

Of course, the foregoing applies only to those who are not now members of the National Bee-Keepers' Association. All such are hereby invited to send on their dues to us *at once*, so we can begin to publish that list of names next week, or at latest in two weeks.

Hurrah for 1000 members!

### Pan-American Apiarian Exhibit.

We have received the following from Superintendent O. L. Hershiser, which he desires to have read by the New York bee-keepers especially:

NEW YORK STATE APIARIAN EXHIBIT AT THE PAN-AMERICAN.

Nearly all the honey in the New York apiarian exhibit is to be replaced by honey of this year's production, as soon as the latter can be obtained from the bee-keepers of this State. A goodly number of New York bee-keepers are now represented, but it is desirable that many more participate. Let all bee-keepers of this State, who are so fortunate as to be favored with fine honey, both comb and extracted, correspond with the superintendent of the New York Apiarian Exhibit, with a view to sending in an exhibit. There will be absolutely no expense to the exhibitor further than the extra pains he takes to produce fine exhibition honey, and in the extra care taken to ship the same in a manner to minimize danger of breakage.

OREL L. HERSHISER, Superintendent.  
1106 D. S. Morgan Bldg., Buffalo, N. Y.

Mr. Hershiser writes us that everything points to a good convention for Buffalo. The use of the lecture room, committee rooms, etc., of the Buffalo Society of Natural Science has been tendered for the use of the National Bee-Keepers' Association, so they are therefore ready with a good hall. He believes that entertainment will be reasonable, and looks for a very large attendance. We hope there will be even a larger gathering than met here in Chicago last August. But that was a record-breaker. Will Buffalo equal it? Having the extra attraction of the Pan-American the Buffalo convention ought to equal the one held here in 1893, during the World's Fair.

**Fat and Lean Bees.**—W. W. Case talks about this in *Gleanings in Bee-Culture*, explaining how it is that a bee-keeper may be mistaken about the bees of a certain colony being larger or smaller than the average. He says that bees get fat or thin according to food conditions, although the fattening process does not enlarge the thorax. He might also have added that a bee may increase perceptibly in size within a few minutes by filling its honey-sac. He says:

In going through my apiary when honey has not been gathered for a month, I have often been struck with the thought, "Are my bees degenerating?" they seeming smaller in appearance than usual; but after a week's run of honey I am struck with the thought, "What fine, large, sleek-looking bees they are!"

### Strong Colonies for Big Yields.

More than one reason can be given why strong colonies should be kept, but it is a very hard thing for a beginner to get away from the thought of the number of hives he has with

bees in them rather than the total number of bees in his apiary. Give him his choice between 10 colonies of 40,000 each, and 18 colonies of 20,000 each, and it is quite possible that he may prefer the latter. The 18 colonies look more to him from the outside. It is true that in the latter case he will have eight more colonies, but he will have 40,000 less bees.

Even some with more experience might make the mistake of thinking that 20 colonies of 20,000 bees each would store just as much honey as 10 colonies of 40,000 each. Without thinking, he may say, "There will be just the same number of bees in either case, 400,000, why will they not gather the same amount of honey?" Let us figure. Schachinger's experiments showed that when

20,000 bees stored daily	$\frac{1}{2}$ pound of honey,
30,000 " " "	$1\frac{1}{2}$ " "
40,000 " " "	4 " "

According to that, a colony of 40,000 bees will not merely store twice as much, but eight times as much! That does not mean that doubling the size of the colony will in all cases give eight times the stores, for a colony of 80,000 bees would not be likely to store eight times as much as a colony of 40,000, and the ratio would vary as the size of colonies would vary, but the general rule will hold good, that in all cases there is great economy in having a large number of bees in each colony rather than to have them divided up into a number of smaller colonies.

This matter will appear less strange when it is remembered that a certain number of bees are needed at home to keep up the heat and take care of the brood, and the proportion of these will be less in a strong colony. It can easily be seen that it will not require twice as many bees to protect two frames of brood as it will to protect one.

It is especially commended to beginners to give this matter careful consideration, and to remember that their success does not depend on the number of hives with bees in them, but upon the number with a strong force in each.

**Placing Combs on a Wagon.**—Considerable discussion has occurred, especially in *Gleanings in Bee-Culture*, as to the proper way to place combs to prevent breaking in hauling. All agree that on a car the frames should be placed parallel with the rails, the ends of the frames pointing to the engine. As to hauling on a wagon, however, there was not entire agreement. But a great deal of testimony is to the effect that either on smooth or rough roads the greatest jolting is sidewise, and that the frames should be cross-wise, with the ends pointing toward the wheels and not toward the horses.



## Contributed Articles.

### "Jouncing" Bees Out of Extracting-Supers.

BY C. DAVENPORT.

THE editor of the Bee-Keeper's Review, one of the most prominent men in our ranks, has said that freeing combs from bees is one of the most laborious parts of the work in producing extracted honey. Probably all will agree with him in this, for it is certainly a great deal of work to brush the bees from each comb separately, and for a number of reasons escape-boards are far from being as satisfactory to clear full-depth extracting-stories of bees as they are comb-honey supers. Why this is so I will not take space to explain, for I wish to describe the method I practiced last season, to clear full-depth extracting stories, also comb-honey supers, and what I shall say about this may, in my opinion, be of more practical value to many who are engaged in our pursuit in a large way than the subscription price to this journal would amount to in 25 years.

I feel perfectly free to say this, because the method was not original with me, and I claim no credit whatever for practicing and describing it. Rambler, of California, is the man to whom all honor about this is due, and this matter illustrates not only the value of taking our bee-papers, but also of reading all there is in them. For years I have read those rambles of the Rambler, in many of which there was little said about bees, or anything connected with them, and in some of them he had more to say about girls than about bees—not that I have any objection whatever to reading about girls, (far from it,) but if it was otherwise I should be many times repaid for reading all he wrote.

If some one was to offer me \$50 not to practice this method for 10 years, I would not think of accepting.

This thing, or method, Rambler called a "jouncer," and having, I trust, given full credit to its inventor, I will describe my method of using his invention.

Mine is simply a box about 20 inches long, 12 inches wide, and 10 inches high, ends made of lumber 1 inch thick, and the sides of boards  $\frac{1}{2}$ -inch thick. That is all there is to it—simply a box without top or bottom. Rambler's was better, and made somewhat differently, but mine works well enough.

The method of using it is to set it down in front of a hive which has a super or extracting story we wish to clear of bees. After taking off the cover and giving the bees a few good, strong puffs of smoke, the upper story is taken off and set down on this jouncer, so it rests across the side pieces, which should not be over  $\frac{1}{2}$ -inch thick. Now by the cleats or hand-holes at each end, the super is raised up an inch or so, and then suddenly dropped on the thin side-pieces of the jouncer. This is repeated a few times, and the results are surprising. With full-depth extracting-stories a half-bushel or so of bees will be on the ground around the jouncer.

As I have said, this is set right in front of their hive and the bees soon crawl in. Until one tries it he would not believe the ease and rapidity with which bees can be jarred or jounced out in this way, after one acquires the knack of doing it just right. It takes longer and requires more jouncing to clear a super of comb-honey than it does an extracting super, for many of the bees, when they fall from the combs, strike the bottom of the sections, which prevents them from falling out. With extracting-combs there is nothing to prevent their falling out on the ground. But most of the bees in the sections can be jarred out in this way more easily, in my opinion, than the supers can be cleared by escape-boards. Besides, what I regard as a great advantage of this plan over escapes is, that the work is done at once, in one operation. It is the method I employed exclusively last season with all surplus that came off the hives. And, seriously, I consider it one of the most valuable things I have learned in regard to our pursuit in many years.

Of course not all the bees can be jarred off in this way, but near enough so I pay no attention to what are left. The honey-house is right in the yard, the windows of which are arranged to allow bees inside to escape, but they prevent those outside from entering; so after jarring out

in this way what bees I readily can from a super, it is carried in, and what bees are left soon find their way outside.

When a large number of supers are carried in at one time, they are piled cross-wise of each other. This is important, to have the bees leave the supers and house readily. When the supers are tiered up tight in the regular way, many of the bees will range up and down the whole tier a long time before they seem to feel convinced that they can not find their friends and mother somewhere in the piles.

I have seen it advised where the honey-house was in or near the yard, to carry in the supers—bees and all—or at least as many of them as would not readily leave by the use of smoke. But this plan, as no doubt those who have practiced it in a large way will be willing to testify, is a very poor method to practice. It will work in a small way, but when a good many bees are in each super, and a large number of supers are carried in at one time, there is such a mass of bees inside that they can not very soon leave by an ordinary escape; and when there are such great numbers they do not, for some reason, seem to wish to leave. I have had large bunches of them hang around to the rafters overhead for days, when there was nothing to prevent their escaping, and after being thrown outdoors many of them would hover around the door and windows, and again enter if they got a chance. When such a great horde are carried in, the noise and confusion that occurs, or something else, seems to effect or derange many in some way so that they take little interest in the world afterwards, or even seem to know where they are or belong. Some may think that these young bees are not old enough to know the location of their hive; they are bees of all ages—young, middle-aged, and old—and during the working season it is not difficult to tell pretty closely how old a bee is; but the worst part of this method with section-honey is that considerable of it may be consumed and damaged by these bees that stay in the house and supers so long, for they do not hesitate to eat what honey they need, or rather apparently, all they can possibly consume.

But what bees I can not jounce out leave the house readily, and with extracting-frames what few bees are left bother but little, even if extracting is commenced as soon as the supers are carried in.

It would be natural for one to think that it would be hard, heavy work to jounce in this way full-depth stories that are well-filled. It is not, though, for a man of average strength with 8-frame hives; and it is a great pleasure to see the bees roll out.

Still, many who read this, and try the plan, may regret that I ever wrote anything in regard to it, for by this method it is a very easy matter to break extracting-combs, especially new, unwired ones. I broke a number before I acquired the knack of doing it right, and found out just how hard a jounce new combs could stand. But this was little loss, for I fastened them in the frames again with twine, and the bees attended to the rest even to cutting off and carrying out the strings after they had the combs fastened.

Sections, the combs of which are but slightly attached at the top only, can also be readily broken loose by jouncing; but I use bottom starters in sections, which insures the combs being fastened to the wood more than strong enough to endure what jarring is necessary to clear them of bees. This jouncing does not need to be heavy and hard—a very quick, light jounce will accomplish more. The super should be raised but slightly each time. It is the quick, rapid jars that cause the bees to loosen their grip and roll out.

Southern Minnesota.



### Prove Theories Before Accepting—A Correction on the Dickel Theory.

BY F. GREINER.

ON page 359, Prof. A. J. Cook gives us a very interesting article on the Dzierzon and Dickel theories. After reading it carefully I am satisfied that no one else would write it as ably and use all the scientific terms correctly. The article contains two minor points which, according to my conception, are not fully true, to which I draw the attention of the Professor as well as the thinking reader.

Prof. Cook says in regard to the queen laying fertilized and unfertilized eggs: "The queen adds or withholds the sperm-cell at will." It is pretty clearly proven by the late experiments of Weisman, that the queen does lay fer-

tilized and unfertilized eggs, but that she should do so at will is nowhere proven, to my knowledge. It is very doubtful in my mind that it ever will be. Without any fear of being proven incorrect, I might claim that the queen always acts compulsorily, that she can not do any differently than add sperm to the worker-egg, and withhold it from the drone-egg. In fact, it seems more reasonable to suppose that these delicate and peculiar organs of the queen act involuntarily, the same as they do in other living beings. We have heard it and read it so much, that a queen can fertilize eggs at will—we have been brought up with this idea—that we scarcely give it any thought. We take it for granted that it is so. Where is there any proof? All we really do know is that she lays both fertilized and unfertilized eggs, and places them in different sized cells, each kind in a special cell; but we jump to the conclusion that she does it knowingly.

It is misleading to speak positively of a thing we do not know. As long as we consider it a theory, an assumption,



PART OF HOME APIARY OF TOFIELD LEHMAN.—See page 418.

tion, some inquisitive mind may be induced to ferret the matter to the end.

As to the worker-bees determining the sex of the egg, the Professor quotes and criticises Dickel as follows:

"Dickel thinks that they [the bees] add saliva [to the egg after it has been deposited in the cell.] In case he is correct in his observation, his conclusion that this has something to do with determining sex does not follow."

On this point I beg to say that Dickel does *not* claim that *saliva* added to the egg determines its sex; he claims this for *another* secretion, the product of a special set of glands (of systems II and III, according to Dickel), the secretion of one determining the male, of the other the female, the secretions of both systems combined determining the sex or nature of the worker. On this basis Dickel attempts to explain how it comes about that abnormally-built workers develop. Perhaps not many of us have observed these funny-looking workers with a drone-like head. Under "Questions and Answers," page 360, such are spoken of. It would be interesting to know how the queen that produced these bees would behave in some other colony.

It is not my object to criticise Prof. Cook—I simply wish to draw attention to these facts as I understand them.

Ontario Co., N. Y.



### An Italian "Atlas of Bee-Culture."

BY C. P. DADANT.

M. R. A. DE RAUSCHENFELS publishes in Milan, Italy, a new edition of the magnificent chromos of the anatomy of the honey-bee, drawn by the Signor Clerici, after the microscopic studies of Count Gaetono Barbo, which were originally published some 25 years ago, under the auspices of the Central Association of encouragement to bee-culture in Italy. A copy of this work is before me.

The present issue, instead of being in detached plates, as formerly, is in the shape of an Atlas (*Atlante Di Apicoltura*) and gives, not only the 30 chromos, in book form, but also a descriptive text opposite each plate. In addition, an extensive and thorough treatise on bee-culture, of the same size, and containing 380 pages and numerous engravings, accompanies the atlas. The title of the latter work is, "L'Ape e la sua coltivazione"—The Honey-bee and Its Cultivation."

Although many have been the microscopic studies, and many have been the publications on the honey-bee, nothing more extensive and more accurate has ever been produced. Girard's cuts, as is well known, are all reduced copies of these chromos. Others have borrowed from them also. The work is now in such a fine shape that it is to be regretted that it has not been published also in a more universal language than the Italian.

The following is a synopsis of the contents of the Atlas:

Plate 1.—A comb with worker-cells, drone-cells, queen-cells, both sealed and unsealed.

Plate 2.—An Italian queen, magnified to 7 inches in length.

Plate 3.—The head of a queen magnified to 2½ inches.

Plate 4.—The genital organs of the queen, the ovaries, ducts and spermatheca.

Plate 5.—Eggs and larvæ, highly magnified.

Plate 6.—The curved sting of the queen-bee, showing the very diminutive poison-sac, and abortive poison-glands.

Plate 7.—The drone magnified to 6 inches in length (Italian drone).

Plate 8.—The head of the drone, showing the large compound eyes, ocelli, and small mandibles.

Plate 9.—The ocelli, or smaller eyes, of the drone, magnified 45 diameters.

Plate 10.—Sexual organs of the drone, the penis, sperm-glands, etc.

Plate 11.—The penis of the drone magnified 15 diameters. Spermatozoa of the fertilizing fluid, magnified 150 diameters.

Plate 12.—The worker-bee, Italian.

Plate 13.—The head of the worker-bee, diameter 3 inches, the antenna magnified to 2½ inches in length.

Plate 14.—The composite eye of the worker-bee magnified to 4 inches.

Plate 15.—The tongue of the worker-bee, magnified to a length of 7½ inches.

Plate 16.—The wing of the worker-bee magnified to the length of 7½ inches. This is hardly up to Cheshire's cut of the same thing, as it does not show plainly the plait and hooklets by which the parts of the wing are hinged together in flight. This is most thoroughly shown in Cheshire's work.

Plate 17.—Anterior and posterior legs of the worker-bee. This is not quite so much detailed as Cheshire's.

Plate 18.—Main artery, which, as we understand it, is practically the heart of the bee (*Vaso pulsante*).

Plate 20.—Salivary glands of the worker-bee. These are the glands which are believed to help prepare the royal jelly, and give the peculiar bee-flavor to honey. Much discussion among scientists has taken place concerning this matter.

Plate 21.—The breathing apparatus of the bee—airsacs, tracheæ, and breathing orifices.

Plate 22.—Digestive apparatus of the worker-bee showing the tongue and its appendages, the honey-sac, stomach, Malpighian tubes, and intestines to the end of the rectum.

Plate 23.—Sexual organs of the worker-bee. Atrophied ovaries of a worker; ovaries of a drone-laying worker.

Plate 24.—The wax-producing organs.

Plate 25.—The sting of the worker-bee.

Plate 26.—Nymph or chrysalis of a worker-bee, during its transformation, or metamorphosis.

Plate 27.—Microscopic view of foul brood, now called "bacillus alvei."

Plate 28.—Magnified cut of bee-moth, miller and worm.

Plate 29.—*Braula coeca* or bee-louse, magnified. Also mandible of fruit-piercing wasps.

Plate 30.—The death-head moth (*Sphinx atropos*), a large moth which is said to enter the hives, in Europe, and feed upon the honey in spite of the bees.

The price of the work, both volumes, is 12 lire. It could probably be furnished to American students for about \$3.00 per copy. It is a fine work of art, well worthy of the country in which it has been produced—the birth-place of fine arts.

Hancock Co., Ill.



(Continued from page 390.)

**No. 2.—Some Reminiscences of an Old Bee-Keeper.**

BY THADDEUS SMITH.

IT is not my intention to go into the history of the first invention or use of the movable-comb hive, as I have not the statistics, and it does not come within the scope of these papers. Mr. Langstroth's patent, I think, was issued in 1852, or about that time, and he admits that some kind of movable combs were used in hives in Europe by Munn, Huber, Dzierzon, and perhaps others, some eight or ten years before his invention or improvements on the hive. I have not even Mr. Langstroth's book before me to refer to on these matters, and I do not wish to go beyond my own memory, assisted by reference to some numbers of the old American Bee Journal.

The invention and introduction of movable-frame hives certainly created a new era in bee-keeping in this country, and the introduction of the Italian bee about the same time gave a still greater impetus to the business. But the Italian bee would have made slow progress in this country had it not been for the movable-comb hive—probably it never would have been disseminated here at all to any great extent.

When Mr. Langstroth offered the first practical working movable-frame hive to the country, involving principles that had never been used in any hive in Europe, there were many, I might say hundreds of imitators and those who professed to have made improvements upon the standard Langstroth hive by making all sorts of changes, mostly of little, and many of no, importance; and on many of these changes and so-called improvements patents were taken out when the only thing of real merit about them was the movable-frame principles of Mr. Langstroth's patent. Scores of these hives, patented and non-patented, were offered and highly commended to the bee-keeping public, the most of them taking the name of their introducer. We had the Quinby hive, King hive, Alley hive, the Flanders three-cornered or Diamond hive, Thomas hive, American hive, Adair's "New Idea hive," "The long Ideal Hive," Gallup hive, Heddon hive, and Price's Reversible, Revolvable hive, and—I think I would better end the list here, for time and space forbid the mention of all of them.

Mr. H. R. King was probably the most persistent of these so-called new hive inventors, in trying to invalidate Mr. Langstroth's claims to originality in his hive. He made a trip to Europe and spent thousands of dollars for the purpose of collecting evidence to disprove Mr. Langstroth's claims. He found, as I have stated in the beginning of this article, that frames of some kind had been used by certain ones in Europe some years previous to Mr. Langstroth's invention; but they all proved so different from Mr. Langstroth's hive, and so crude in comparison, that Mr. Langstroth's claims were sustained in the suit brought to test the matter. N. C. Mitchell was another hive patentee who violently assailed Mr. Langstroth's claims, and established a new bee-paper for that purpose. In the early seventies the battle of the bee-hive men waxed warm indeed.

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This hive was an admirable adaptation of frames to the form of the old box-hive—tall in proportion to length and breadth, was well made, and of neat appearance. For surplus there was the ordinary cap, covering a neat honey-box with glass in each end. There were but eight frames, and they were fixed so as to be stationary, but still by a peculiar arrangement were very easily handled. It had a sloping bottom-board with a lot of minor "fixings" of no especial value. The frames, of course, were large. Soon after this I became the owner of a Peabody honey-extractor, and the Thomas hives did not suit me. I abandoned the use of them, although I had made a number besides those I bought. There is one about now, in first-rate state of preservation for having laid in the lumber-room of my barn for the past 20 years; others went for hen's nests and chicken-boxes.

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"I have made a hive on the plan of Mr. Gallup, that I believe possesses many advantages, and is capable of being used more ways, with the same size frame for all the different styles, than any hive I have seen described. The brood apartment is the plain box of Mr. Gallup—11 inches wide, 14 inches deep, 18 inches long, or as much longer as may be desired. The frames are hung across the narrow way.... We can use this hive, 1st, as a simple frame hive with large room on top for surplus boxes; 2d, by extending the length to any desired number of frames; frames for surplus honey may be put in each end for emptying with the extractor; 3d, it can easily be made a two-story hive with the same size frames in the upper story; 4th, by having movable side-boards it may be made a non-swarm, on Mr. Quinby's and Mr. Alley's principle, and piles of honey-boxes may be put on the sides and top. I have one with 13 frames, 16 five-pound boxes form the sides, and three 12-pound boxes on top—all enclosed in a suitable case. From all that I have read on the subject of hives, I think that I have hit the golden mean in width and depth.... I call this hive, with its non-swarming and box arrangements, the 'Quinquaplex-Duplex-Combination-Non-patented-Super-floors-Honey-producing Hive.' It is said there is nothing in a name, but if I could only get Mr. Price's 'Reversible-Revolvable' attachment, with the privilege of adding the name, there would be considerable improvement in adopting this compilation for the modified arrangement."

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And where are the hives of King, of Thomas, of Flanders, and of the whole list of these so-called improved hives? Echo answers, "Where?" We certainly hear but little from them now through the press. And their makers and inventors? Many no doubt, like Mr. Langstroth, have passed over the border to the Beyond, where they are free. We hope, from toil, envy and strife. And the rest of us old fellows—their cotemporaries—must, in the nature of things, soon follow. Ontario, Canada.

## Swarming—Moving Bees—Queens, Etc.

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"LOOK! thar's a whoppin' big swarm, whars yer cow-bell? Guess I ken stop 'em."

"Oh! Tom, don't hop so excitedly, and don't punch a hole in the bottom of my wax-extractor. Just let them alone, and you will soon see they will settle without any music. Hand me that little wire cage off the shelf, and come with me, no danger at all. See, here's the queen climbing this blade of grass. Ah! that's accommodating. Just to walk right into the cage, off the grass. See, Tom, they are clustering in the top of that apple-tree?"

"Wal, Kunnel, that's the fust swarm of bees I ever saw stopped without a racket. Thet's the purtiest and longest bee I ever saw, why, she is as yellor as gold. Wat was she skirutin' in the grass fur? Tho't kings went up with the swarm."

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"Oh! never mind doing that, Tom. Please just help me move the old hive back here—that's alright. Now, kindly help me place this new hive in place of the old one, there, now place the caged queen at the entrance over at that shady corner. You will now see how I hive bees."

"Yes, and I told you Kunnel, to let me rap on the old basin, or they will lite out."

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Why, yes, they are working as nicely as any colony in the yard, although they haven't been here two hours. I will first remove the screws that hold on this frame covered with wire-cloth, you see they have all gone down. This frame is two inches deep, but when we arrived it was full of bees clustered so as to relieve the brood-chamber of as much heat as possible. In warm weather they need fresh air, therefore when we move them far, an extra space for a part of them to cluster in should be furnished, and the hive covered with wire-cloth, then there is less danger of overheating and melting the combs down."

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These corrugated sticks were put in to hold the frames apart, one at each end on top and one in the center at the bottom. I will place them in this new hive as I remove the frames and then I won't be bothered with the corrugated stick on the bottom."

"Why, Kunnel, they seem to fit jist as well in this gum as t'other. How did you hapen to git 'em so alike, four hundred miles away?"

"Tom, these hives are made and shipped all over the country; every piece fits any hive, no matter if you buy it in Australia. It would be a great help to us for all bee-keepers to use a standard frame; and I will be glad to see one adopted. See, here is the queen and a fine one she is."

"Thet's tru', Kunnel, she's a whopper, broader between the shoulders and longer than t'other one, but not so purty gold-like, as t'other one, and these bees are longer too, but three strips of gold around them. T'other was nearly all gold lookin'. Say, Kunnel, what on airth is she crawfishin' into thet cell fur, has she sot down to rest?"

"Ha! ha! why she is depositing an egg. Tom, see, she is through, and peeping into other cells to find an empty one—there, watch her."

"Now, if that ain't funny, didn't she hump thet long back and crawfish as purty like. Say, Kunnel, I hev heard of hens layin' two eggs a day, but I never bleved they culd

do it. Look, thet old huzzy is humpin' her bak agin. Well, that's three in a minute and a half, is she all eggs?"

"Very nearly so, Tom; at least she can deposit from three to four thousand eggs in a day of twenty-four hours. You see, they do not stop at night. These eggs would make a pile about as long as the queen I think."

"Gee, whiz! Wish we could get some Italian chickens and geese and turkeys an' ducks. Can't you 'port 'em Kunnel?"

"We could get them, Tom, but they would be no better than yours, probably not as good. I see my wife at the window waving her handkerchief, and here I've been over two hours without going up to see whether she was dead or alive. I became so engrossed with my bees that I forgot everything, and I just now remember I haven't had my breakfast and dinner. You see she pets me some when I've been away."

"Thanks, Kunnel, I jist thot of it, Bil Johnsin sed he'd cum to my house at ten o'clock to buy my yearlings and I reckon he thinks I have left these diggens. I will hev to hurry on. I got that ocyvide with the bees that I forgot everything 'cept Sara Jane, and I jes wish she war here to see 'em."

"Very glad to see you take such an interest in them, and you seem not to be afraid of them now. I will need some help this summer, and if you can come over and bring Jake to-morrow, we will extract some honey, and see if I can't give you some further instructions. Say, Tom, you need not wear out your cow-bells ringing down your swarms, just spend that time getting your hive ready, and you will spend it more profitably."

"Kunnel, I will be ded sho to come and bring Jake to-morrow an' help you. Jake is a peart lad, jist twelve yest'day an' he's mity fond of bees. I see your wife shakin' thet 'kerchief at you, and you had better go, or she will be after you. Good evening, Kunnel."

"Good evening, Tom, I shall expect you."

"Good mornin', Kunnel, Jake and me hev been here two hours and Sara Jane she thot we would be late."

"Good morning, Tom, and Master Jake, I am especially glad to see little boy bee-keepers. They make the best ones in the end. Tom, you see the bees are cross early in the morning. The sun has warmed them up now, so we will get to work, everything is ready."

"Well, Kunnel, Jake he's mighty struck and ses he's goin' to be a bee-keeper and get some *hitalan* bees."

"Alright, my boy, I will help you get started. Now bring out the wheel-barrow, and nine dry combs, while I start the smoker. I always have it handy—but use it as little as possible. I find cedar bark, well packed, lasts longer, and gives the best volume of smoke of any fuel. Here is number one, see, I gently pry off the top, and use just a little smoke, push several frames just a little nearer together, so as to get room to draw out a frame without crushing the bees. Now I give the frame a quick jerk, which you see clears the comb of most of the bees, and this long turkey feather soon gets off the balance; now as we have out three frames of honey, I will put in one of the empty combs every time I take out a full one. Here is one full of honey, but not capped; we will leave that, as it is too thin when not sealed to make a good grade of honey. It is not 'ripe.' After extracting this honey, we will exchange the empty combs with number two, for her full combs, and so on through the apiary. Tom, draw your honey-knife across the sharp edge of the cross-piece over the uncapping can, to clear off the honey, and when the knife gets gummy put it in a bucket of water, which dissolves the honey, and you will find that it will then shave off the cappings nicely. Here is a new tender comb, and I will have to turn the extractor much slower to prevent breaking the comb."

"Kunnel, sum of these combs are made of black wax, and sum of white wax, whar do they get the different culors?"

"All combs are like this new one when first made, but become black with age. I have old black combs just thirty years old, but I get just as nice clear honey from them, as from these new ones—besides they are tough and stand more rough handling than new comb."

"Kunnel, here is a low gum. What we goin' to do here?"

"Let us see how they are getting along. Oh! nicely, they are sticking on little bits of white wax along the top cells, and are crowded with bees. Hand me that queen-excluding zinc off the wheel-barrow, and I will put on these freshly extracted combs, which will put them right to



(Continued from page 390.)

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"Thet's tru', Kunnel, she's a whopper, broader between the shoulders and longer than t'other one, but not so purty gold-like, as t'other one, and these bees are longer too, but three strips of gold around them. T'other was nearly all gold lookin'. Say, Kunnel, what on airth is she crawfishin' into thet cell fur, has she sot down to rest?"

"Ha! ha! why she is depositing an egg. Tom, see, she is through, and peeping into other cells to find an empty one—there, watch her."

"Now, if that ain't funny, didn't she hump thet long back and crawfish as purty like. Say, Kunnel, I hev heard of hens layin' two eggs a day, but I never bleved they culd

do it. Look, thet old huzzy is humpin' her bak agin. Well, that's three in a minute and a half, is she all eggs?"

"Very nearly so, Tom; at least she can deposit from three to four thousand eggs in a day of twenty-four hours. You see, they do not stop at night. These eggs would make a pile about as long as the queen I think."

"Gee, whiz! Wish we could get some Italian chickens and geese and turkeys an' ducks. Can't you 'port 'em Kunnel?"

"We could get them, Tom, but they would be no better than yours, probably not as good. I see my wife at the window waving her handkerchief, and here I've been over two hours without going up to see whether she was dead or alive. I became so engrossed with my bees that I forgot everything, and I just now remember I haven't had my breakfast and dinner. You see she pets me some when I've been away."

"Thanks, Kunnel, I jist thot of it, Bil Johnsin sed he'd cum to my house at ten o'clock to buy my yearlings and I reckon he thinks I have left these diggens. I will hev to hurry on. I got that ocypide with the bees that I forgot everything 'cept Sara Jane, and I jes wish she war here to see 'em."

"Very glad to see you take such an interest in them, and you seem not to be afraid of them now. I will need some help this summer, and if you can come over and bring Jake to-morrow, we will extract some honey, and see if I can't give you some further instructions. Say, Tom, you need not wear out your cow-bells ringing down your swarms, just spend that time getting your hive ready, and you will spend it more profitably."

"Kunnel, I will be ded sho to come and bring Jake to-morrow an' help you. Jake is a peart lad, jist twelve yest'day an' he's mity fond of bees. I see your wife shakin' thet 'kerchief at you, and you had better go, or she will be after you. Good evening, Kunnel."

"Good evening, Tom, I shall expect you."

"Good mornin', Kunnel, Jake and me hev been here two hours and Sara Jane she thot we would be late."

"Good morning, Tom, and Master Jake, I am especially glad to see little boy bee-keepers. They make the best ones in the end. Tom, you see the bees are cross early in the morning. The sun has warmed them up now, so we will get to work, everything is ready."

"Well, Kunnel, Jake he's mighty struck and ses he's goin' to be a bee-keeper and get some *hitalan* bees."

"Alright, my boy, I will help you get started. Now bring out the wheel-barrow, and nine dry combs, while I start the smoker. I always have it handy—but use it as little as possible. I find cedar bark, well packed, lasts longer, and gives the best volume of smoke of any fuel. Here is number one, see, I gently pry off the top, and use just a little smoke, push several frames just a little nearer together, so as to get room to draw out a frame without crushing the bees. Now I give the frame a quick jerk, which you see clears the comb of most of the bees, and this long turkey feather soon gets off the balance; now as we have out three frames of honey, I will put in one of the empty combs every time I take out a full one. Here is one full of honey, but not capped; we will leave that, as it is too thin when not sealed to make a good grade of honey. It is not 'ripe.' After extracting this honey, we will exchange the empty combs with number two, for her full combs, and so on through the apiary. Tom, draw your honey-knife across the sharp edge of the cross-piece over the uncapping can, to clear off the honey, and when the knife gets gummy put it in a bucket of water, which dissolves the honey, and you will find that it will then shave off the cappings nicely. Here is a new tender comb, and I will have to turn the extractor much slower to prevent breaking the comb."

"Kunnel, sum of these combs are made of black wax, and sum of white wax, whar do they get the different culors?"

"All combs are like this new one when first made, but become black with age. I have old black combs just thirty years old, but I get just as nice clear honey from them, as from these new ones—besides they are tough and stand more rough handling than new comb."

"Kunnel, here is a low gum. What we goin' to do here?"

"Let us see how they are getting along. Oh! nicely, they are sticking on little bits of white wax along the top cells, and are crowded with bees. Hand me that queen-excluding zinc off the wheel-barrow, and I will put on these freshly extracted combs, which will put them right to

work in the super. Jake, you run up into the extracting room, and get us nine empty frames for the next hive. Well, this is the last hive, and we have taken about four thousand pounds in ten and a half days. Now, I want to arrange cells for a few hundred queens. We will not need our smoker, as I do not breed from cross bees."

"Wat's them little yaller things you're gittin,' Kunnel?"

"Queen-cells, Tom."

"They are mity purty, Kunnel. Does the queen stick them on the little stick that way?"

"No, Tom, the queens do nothing except deposit eggs. My little daughter, Annie Dane, makes these for me, it is just fun for her, and saves me a great deal of time, as I use hundreds of them."

"Well, I declar, thet child is only eight years old, an makes such nice little things? Looks to me like it would take a regler jueler to do sich work, how on airth does she make them so thin and smooth at the mouth and so round and nice?"

"I will lend you a book, written by Doolittle, that explains this fully, and let me say right here, Tom, I would not go back to the old method of queen-rearing for one thousand dollars cash. That book is worth its weight in fine gold."

"Well, Kunnel, I will put it under my piller every nite and bring it back soon as Sara Jane and me and Jake reads it; an we will be mity proud to read it. Wat's thet quill spoon for, Kunnel?"

"This is to transfer the larvæ from the worker-cells to the queen-cells. I will show you the modus operandi. Here are eighteen cells in this hive nearly ready to cap over. See, twelve are large and rough, four are smaller and rather smoother. I always destroy such cells, so I will take these four, and use their royal jelly to put in these new cells—hand me the stick, Jake."

"Why, Kunnel, here's a worm in this one, is it a moth?"

"No, Tom, it is a young queen, see I can throw them out this way, and dip up a small quantity of the royal jelly with my quill spoon, and place it in the bottom of the new queen-cells, thus; now, I have fixed thirty-two cells. I will get the larvæ from the 'Berberini' imported queen. See, I remove this dummy first, and find the queen."

"There she is, Kunnel, on thet frame."

"Thanks, Tom, your eyes are keen. You see I can not afford to risk dropping so fine a queen in the grass or to injure her, therefore I never take any chances. I will just take this frame and leave her in the hive. See, here is plenty larvæ just the right size, about twelve to twenty-four hours old. I slip my quill spoon under them this way, raise them out and slowly lower them into my queen-cells, until the point of the quill just touches the royal jelly at the bottom, and by drawing it back, the little larvæ sticks to the royal jelly, which is in its nature glutinous. Now all the cells on this stick have larvæ in them. I will place it between these two combs of brood in super of number 50. See the stick fits tightly in this frame half filled with comb, and the brood on both sides will help keep the little queens warm, as the bees cover these combs all the time."

"Why, Kunnel, won't the little queens fall out, with the mouths of the cells down thet way? And how on airth do you take little worker-bees an make queens outen them?"

"No, Tom, they won't fall out, the jelly holds them, and its their nature to grow with their heads down. Never horizontally, like a worker-bee. The peculiar food given them in great abundance, and developing in large perpendicular cells, transforms them into queens."

Now, that I have my one hundred queen-cells stocked with larvæ, I will take out some ripe cells."

"Wat do you mean by ripe cells, Kunnel?"

"A ripe queen-cell is as easily distinguished as a ripe apple. See this stick of queen-cells. The points are all light-colored and pointed, these will be not be ripe for several days. Now here is a stick of cells that will hatch to-morrow. See they have blunt flat ends that are brown, and rough. The bees knowing that the young queens will want to come out to-morrow, are helping them by trimming off the points of the cells. I take them off the day before they are due, and carefully place them in the half-inch holes you see in this block, with the points resting on the little wool cushions so as not to jar, or injure the young queen. I have only twelve ripe cells this time. Tom, here is what we call a queen-nursery, which is merely a very small swarm of bees—enough to cover well, two or three Langstroth combs."

See this patch of brood? I place the cells thus, just above the brood and press it into the comb. See, no danger in pressing a Doolittle cell into a comb that way, but a very light pressure would destroy a natural cell. This nursery has been queenless two days, and will gladly accept the cell. Now here is a nursery containing a queen that I wish to mail to-night. Here she is; see I remove the cork in the end of this cage, and pick her up by both wings poke her head in the hole from which I took the cork, thus. See, she went in nicely, and to keep her there, I place the end of my thumb over the hole until I can put in ten or a dozen workers *not too young*. Now all are in, I replace the cork, tack on the cover, thus. Now I will put on a one-cent stamp and send them to the post-office. I will have to protect the cell, or the bees will destroy it before they miss their queen. This wire-cell protector prevents this, and by the time the young queen emerges from the cell, they will have discovered the loss and will gladly receive her. In two days she will be laying and I will ship her, give them another cell, and continue to do this until the season is over."

"Well, Jake, here is the new hive with foundation, all ready to hive your swarm on. You shall have a nice queen, a descendant of the Berberini stock, as soon as your colony is ready for her, and I predict that a progressive young bee-keeper will make his start with this colony."—Progressive Bee-Keeper.

## Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

### Swarming—Long-Tongued Bees.

I take some encouragement from the letters of C. H. Harlan and F. M. Creighton, page 396, in knowing that sharp eyes are upon me with kindly hearts behind them. Mr. Harlan's statement is exceedingly interesting, and I am wondering whether he has exceptional bees or an exceptional locality. I wish he would give a little fuller light upon it. When he hives the first swarm in a new hive, if I understand him, he cuts out all queen-cells but one in the old hive, and then a little after this a swarm issues with the young queen from the cell that was left. Now, how long after the cutting out of the cells does this swarming occur? Then does he mean that from this same old colony a third swarm will issue six or eight weeks after the issuing of the second?

Mr. Creighton thinks that long tongues would be of no advantage in his locality. He is no doubt in a very large company who think only of red clover as the one honey-plant to give value to long tongues. A correspondent in the Southland Queen speaks of a honey-plant with tubes so deep that the bees only get part of the nectar, and he thinks long tongues are needed to get it. Mr. Doolittle says, page 293, "long-tongued bees would be an advantage to those residing where red clover and other long-tubed flowers abound." (Italics mine.) Is it not possible that these long-tubed flowers are generally distributed everywhere? Does Mr. Creighton know that within the range of his bees there are no flower-tubes so deep that his bees can not reach all the nectar in them? If he does not know this, then he does not know that long-tongued bees "would store no more honey" for him. If he does know it, will he kindly tell us how he knows it? But I'll throw up my hat with him, and hurrah for the bees that don't swarm, in preference to the ones that get the red clover honey.

C. C. MILLER.

### Swarm Left After Being Hived.

At noon to-day I hived a large swarm of bees, then set the hive beside the old one that the bees came from, intending, when I came home from the shop at 6 o'clock, to change places with them, putting the new one where the old one was; but at 6 o'clock there were no bees in the new hive. Do you think they went back into the old hive, or left for



the woods? The entrances both faced the same way, and were close together. The new hive contained full frames of comb with a little honey in some of them.

CONNECTICUT.

ANSWER.—I don't know, but I'm afraid they went to the woods. At any rate, without knowing anything about the cases except that 100 large swarms after being hived had deserted their hives, I should feel pretty safe in saying that not more than one or two of them had gone back to the hive from which they came. You ought to be able to tell something about it by the appearance of the old colony. If the swarm did not return to it, the scarcity of bees ought to be easily noticed. The position of the hive had nothing to do in the case, except that it would help to make the bees desert if the hive stood in the hot sun. The chief factor in inducing a swarm to desert its hive is heat. Be sure that the hive is very open at the bottom, and for a day or so it is well to have the cover a little open, and if the hive does not stand in a shady place use some means to shade it, if nothing better to cover it with an armful of long grass or hay, anchored down with two or three sticks of stove-wood. Some make a practice of giving to a swarm a frame of brood.

#### Self-Hiving Arrangements for Swarms.

Can bees, when swarming, be transferred to a new hive by closing the opening in the old and new hive so as to be queen-tight, except a wire gauze connecting the two hives through which the queen could pass into the new hive, and the worker-bees to pass out and in as usual? If this plan would not work at all, please say what the objections would be.

WASHINGTON.

ANSWER.—Several different arrangements have been gotten up on the principle you mention. I don't know enough to tell you exactly as to the objections, but I think none of them have given enough satisfaction to be continued.

#### Are Bees Taxed in Wisconsin?

Are bees assessable for taxation in Wisconsin?

WISCONSIN.

ANSWER.—I don't know. A lawyer, or an assessor, ought to be able to tell you. There is no reason why they should not be taxed as well as other property.

#### Wants to Be a Big Bee-Keeper.

I am a boy of 16, and I love to handle bees. I have an apiary of six colonies, and would like to enlarge it to 75 or 100 by next spring. I can buy bees in this county at from 50 cents to \$3.00 per colony in box-hives, and I think there will be a boom in bee-keeping in this part of the country in a couple of years, as the common red clover has gone out of existence, and the famous alfalfa is taking its place. There will be thousands of acres in alfalfa. My apiary is situated on the banks of Big Pipe creek, and its fertile valley will yield acres of alfalfa. The farmers can't get a stand of red clover any more, and almost every farmer has a patch of alfalfa started for seed, and in three years the Big Pipe valley will be all alfalfa. Will the bees work on alfalfa in this country? How can I start a big apiary here? I have the bee-fever, and nothing will stop it but hundreds of colonies of bees.

MARYLAND.

ANSWER.—Alfalfa is grown on a large scale in the West, and many tons of alfalfa honey are secured, but I have never known of its yielding honey anywhere east of the Mississippi. To decide the matter for your locality, wait till alfalfa has been in bloom a few days, then watch to see whether bees are busily engaged upon it on bright, hot days.

If you want to run your six colonies up into the hundreds, it will be advisable for you to gain a full knowledge of the business by carefully studying one or all of the books on bee-keeping you can get, and also gaining practical knowledge by actual work with the bees. By studying a good bee-book you will learn something about the principles of bee-keeping that will allow you safely to take into your own hands the matter of increase if you do not prefer increase by natural swarming. If you want to increase from six to 75 or 100 this year, it should be mainly by purchase. Aside from what you purchase, it will hardly be advisable

for you to increase the six to more than 18, and 12 would be better. Your increase of knowledge and experience should keep pace with your increase in bees, if indeed it does not outrun it, and unless you have had considerable experience with bees it might be better not to increase this year, either by purchase or otherwise, to more than 25 or 50. When you have thoroughly studied your text-book there will be questions arising to trouble you, and it will be a pleasure to help you out in this department.

#### Any Nectar in Mullen?

Is there any nectar in the mullen-bloom? IOWA.

ANSWER.—I don't know. I never saw a bee at work on it, but it is not plenty where I live.

#### Requeening by Hiving Swarms.

I have some colonies of bees that are building up slowly, the queens being probably old or inferior. If I remove the queens and in a day or two have a new swarm in with them, would you approve or disapprove of this plan of requeening them? If it meets your approval, would you give them a first or second swarm? PENNSYLVANIA.

ANSWER.—It would probably work all right. Unless the colonies are very small it would be as well to use second swarms.

#### The Gehring Bee-Veil.

A correspondent writes in defense of the Gehring bee-veil, referring to page 313, and says that he has used just such a veil himself in the hottest days without inflicting punishment on himself, and thinks it "the all-around best for beginners." He says:

"A beginner doesn't want a patent bee-veil, nor an expensive one, nor one that is hard to make, bunglesome to wear, or easily torn when worn among trees and bushes. A veil, the whole of which is made of bobbinet or cape-lace, may do very well for a regular bee-keeper who has clear sailing every day in his well-kept apiary; but it will not do so well for a man or woman needing one only occasionally, and then perhaps in climbing a tree after a swarm. Did you ever try a Gehring bee-veil, Doctor? If not, your criticism is not up to your usual grade."

I may say in reply, that I hardly see why a beginner should not have the same kind of a veil as a regular bee-keeper. The bobbinet veil I spoke of wearing is not patented, nor expensive, it is simpler to make than the Gehring, and it is not bunglesome to wear. I suppose it is more easily torn than cheese-cloth, but I have little trouble with its tearing, even when climbing trees. I do not know that there is likely to be clearer sailing in the apiary of the beginner than in that of the veteran. The beginner in bee-keeping is likely to have his place just as well kept as one who has kept bees for years, and in either case I should rather have a veil that requires care to prevent tearing, than one that would be uncomfortably warm.

No, I do not remember ever to have worn a veil of cheese-cloth. Neither have I ever worn one made of woolen flannel. But I know without wearing a woolen-flannel veil that it would be warmer than one of cheese-cloth. Do you really think I can not know that a cheese-cloth veil would be warmer than one of open lace-work, without actually wearing it? For me the most open veil I have ever worn is a punishment on a very hot day, and I doubt that I am more sensitive in that respect than most persons. So I should not advise the general use of cheese-cloth for bee-veils, either for a beginner or a veteran. If any one is so exceptionally constituted that he will feel no inconvenience on the hottest days from a cheese-cloth veil, by all means he should use the closer, firmer material.

C. C. MILLER.

**Why Not Help a Little**—both your neighbor bee-keepers and the old American Bee Journal—by sending to us the names and addresses of such as you may know do not now get this journal? We will be glad to send them sample copies, so that they may become acquainted with the paper, and subscribe for it, thus putting themselves in the line of success with bees. Perhaps you can get them to subscribe, send in their dollars, and secure for your trouble some of the premiums we are constantly offering as rewards for such effort.

## \* The Home Circle. \*

Conducted by Prof. A. J. Cook, Claremont, Calif.

### THE TRUE HOME THE CORNER-STONE.

I need not say in these "Home Circle" papers—I need not say anywhere, for it surely goes in all our blessed country without saying—that the true home is the very corner-stone in every true society. The best society is builded on its homes. The child that knows no home is bereft indeed. The child that knows not the truest harmonies that alone can make the true home, loses the best that can enter into the life—the soul—of any child.

I dare say I have said all this in other form before. It will bear repetition. I may wisely say it over and over. I hope my readers may take up the song and give it warm, glad utterance. Let us wake in the hearts and minds of all our dear children, the idea of the blessedness of the best home, that we may beget in them an absorbing ambition each day to be the head or centre of the very best home felicity. To this end let me have all your ears to-day as I press the importance of our

### SPEECH IN THE HOME.

I am a believer—a sincere believer—in prayer. The man whose life is not braced and anchored in prayer lacks a best help to make his own life superlatively excellent, and his own home what the "Loving Father" wishes it to be. I wish we might all daily pray, "Oh, God, may the words of my mouth this day and ever be such as becometh the gospel of peace." Of course, good words mean a good heart. "Out of the abundance of the heart the mouth speaketh." So we may build onto that prayer, "Create within us a clean heart, oh, God!"

I am led to all this by the statement in *Gleanings in Bee-Culture* that \$1,059,565,787 is the annual drink-bill of our people. I hope *Gleanings* made a mistake. I fear it is all too true. Oh, friends! is there not a terrible pathos in those figures?

A woman comes to our house each week to help us. She has great energy, has marked intelligence, and has a family of bright, winsome girls. She has had a hell of a home. An intemperate husband is her ill—her terrible—fortune. When drunk he is a very fiend, and no one's life is safe. She loved the father of her precious children. Over and over she received him back as the prison-doors unlocked and let him forth as sentence for repeated debauches expired. At last, in sheer despair, she has, with broken heart, sent him forth to return no more. Who of us that have been saved from such woes and anguish, can possibly appreciate the misery and despair of those hearts and that home? Who of us will not say with deeper anguish, We will do even more to drive that anachronism of our day and civilization—the saloon—from our country? And I wish here to speak of one way.

Do we joke at intemperance? Do we laugh and exclaim in merry mood as the poor, besotted wretch passes us by? Or the rather, does our face sober, and our whole demeanor tell of our sorrow and regret for the fallen soul?

Not long since I was in a Los Angeles street-car. At a stopping, we were brought to face a policeman leading a young soldier in soiled uniform, who was staggering drunk. His maudlin utterance and reeling gait caused almost all in the car to laugh, and even jokes were made at this awful sight. I wondered then—I wonder still—how any one could even think to laugh. *A soul on the down grade!* Or how such a scene could suggest the lightsome word. I rode away sorrowing, and have sorrowed ever since when the picture has returned to memory.

Oh, can we not commence so early to impress our children with the horrors of drunkenness, and the awful evils of the drink habit, that they will not only abhor the saloon and all its vile belongings, but will sadden, and sorrow, and speak grave words, at sights such as I have just depicted?

There is another evil greater than intemperance. It is well called "the social evil," as all others sink before it. Yet who has not seen the grimace, and heard the joke even from lips that claimed to be those of Christian gentlemen? Oh! fellow parents, let us pray, study, think, plan, that we may so culture and refine our dear boys and girls that they may ever walk in ways of cleanness and purity, and that they may sorrow with unutterable sorrow as they become conscious of the ruined, hopeless lives that cloud even our American society. And may never help, by look, word, or act, to add

to the grewsome company that form the sorest blot on our body politic.

### CHURCH-GOING.

I hope there may not be too much sermonizing in this manifesto to our homes. Nearly everybody goes to church here in Claremont. The same is true of Pomona. I have heard it stated that over 90 percent of the Pomona people, including children, are church-goers. Though Pomona has several thousand people, like Claremont she has no saloon. Church-goers and saloons do not flourish on the same soil.

One of our Claremont citizens is a nice man, and has a nice family. His wife always goes to church. She formerly brought all the children. I often remarked to Mrs. Cook, "Oh! that that man could see his mistake." Later the oldest boy ceased to come with the mother. This summer that boy with two others ran away from home. No one knew where they were for days. There was solid grief in those homes. Would not that father, had he gone to church, given the dear wife the richest of comfort? Would he not have been likely to have received inspiration that would have helped him to say better words and do better things before those bright children? Would he not, more than likely, have prevented that sorrowful episode in the home that all felt to be a disgrace?

Now I notice that the second boy is not coming, and only the little girl keeps the mother company. Here, where nearly every one goes to church, how easy to have kept the boys in church and Sunday-school. We have a model Sunday-school in which splendid men and women in prospective are being beautifully fashioned. I truly believe that if our fathers only knew how much such meetings helped to make grand men and women, as well as beautiful and obedient boys and girls, not to say worthy and excellent citizens, they would soon be found of a Sunday morning leading the family to the house of worship. And, oh! how that would rejoice the yearning, longing heart of the mother.

Two years ago I stepped off the train in the great Grand Trunk depot of Chicago. I had written our friend, Mr. York, that I would come on that train. He had written me that I was to wait till he came. It was in the early evening of Sunday. I waited long. It was not tedious. I never am lonely in such places or at such times. The people, some good book or magazine, always make the hours, like birds, fly by. Later our good friend came. He was just from church, where he and his delightful wife always aid in the worship.

God be praised that the old American Bee Journal has a Christian editor, who fears God and desires above everything else to keep his commandments. This fact makes for the refinement and betterment of every reader of our beloved American Bee Journal.



"WILDWOOD APIARY" OF R. V. Goss.—See page 418.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at \$1.00.



## To Our Shippers.

About May 1st last, we removed our business from the buildings 120-122 W. Broadway to larger and more commodious quarters at Nos. 265-267 Greenwich St., and 82, 84, 86 Murray St., and we duly sent to our friends in the trade a notice of our removal. Shortly after we vacated the premises (120-122 W. Broadway,) one Joseph M. McCaul, rented a portion of our old quarters, and hung out a sign, "Hildreth, McCaul Co., Jos. M. McCaul, Prop.," with other large signs to the effect that his business is "headquarters for honey, beeswax, maple sugar and maple syrup."

The mercantile agencies report that Jos. M. McCaul is the sole proprietor of the new business, and that he claims to have paid to one Henry P. Hildreth (who has no connection with our business,) a consideration for the use of his name.

We will not comment upon the act of leasing our old quarters and exposing thereon the sign, "Hildreth, McCaul Co.," further than to state that we have instructed our attorneys to apply for an injunction restraining the said McCaul from using the name of "Hildreth" in connection with his business in any manner whatsoever.

We value highly the good name and business we have established by many years of satisfactory dealing with our friends in the trade, and we therefore send this notice so that you may not possibly confound us in any manner with the so-called "Hildreth, McCaul Co."

Our firm name remains as heretofore, and all our business is carried on at our new quarters—

**Nos. 265-267 Greenwich Street,  
and Nos. 82, 84, 86 Murray St., New York, N. Y.**

Respectfully yours,

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Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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## Prospects for a Large Yield.

Bees wintered well throughout this country, and are very strong, working on alfalfa and cleome. The prospects are good for a large yield of honey.

The American Bee Journal comes regularly, and is a welcome visitor. W. H. HOUGH.  
Santa Fe Co., N. Mex., June 15.

## No Nectar in White Clover Bloom.

We have the finest crop of white clover bloom in this section that I ever saw, but there is not a drop of nectar in it, and as this is the only source for a honey-flow at this time the bees are starving. There has been just about enough rain to be seasonable, and plenty of nice, hot, sunshiny days, and it does seem as though everything was favorable, but there is no honey. I would like to ask the reason for this, if any one can tell.

M. D. ANDES.  
Sullivan Co., Tenn., June 15.

## Queens Galore in One Hive.

On Saturday, June 1, I assisted a neighbor, Mr. Balk, in dividing a colony of bees, dividing them as nearly equal as possible, and moving the queen from the hive to a new stand. Yesterday two swarms emerged from the hive on the old stand, one after the other, each having a queen, and all being in the air at the same time without mixing. Immediately after hiving them he examined the hive from which they came, and took from it nine queens, three of which he brought to me. Next.

If there is any bee-keeper who can beat that let us hear from him.

My bees are working on red clover for all there is in it. WM. M. WHITNEY.  
Kankakee Co., Ill., June 17.

## Honey Coming in Fast.

The prospect is for a good honey crop. I have 48 colonies, and 42 of them have supers on filled with clover honey ready to cap. It is coming so fast that I have two supers on some of them to keep them going. I took off two pounds of comb honey and four gallons of extracted June 16.

Sweet clover will be in bloom in a week or two. H. C. FINN.  
Kane Co., Ill., June 19.

## An Aged Bee-Keeper.

Two years ago I had 24 colonies of bees. This year I took eight out of winter quarters, and have had two swarms.

I am in my 80th year, and like the Bee Journal very much. CHRIST BLOUGH.  
Somerset Co., Pa., June 17.

## Black Bees vs. Italians.

I expect to stir up a veritable hornet's nest with what I am about to say, nevertheless here goes:

In looking over the advertisements in Gleanings in Bee-Culture and the American Bee Journal, I can not help noticing that everybody seems to be either rearing Italian queens (and they are always "the best"), or is just about to Italianize common black bees. Now, I wish to make the assertion that the black or brown bee are the best bees for this locality, and for the average person who keeps a few colonies and doesn't pay close attention to them.

In the first place, they always winter better here; and the reason for it is that they have more good, sound, common-sense, and use more judgment, than the Italians, and do not

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Retail—Wholesale—Jobbing.

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## Full Line of Supplies,

with prices and samples, free on application. BEESWAX WANTED.

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may go through PAGE 25 wire 58 inch Fence, but no rabbit, chicken, pig, hog, horse nor bull can.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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# QUEENS

QUIRIN—THE QUEEN-BREEDER—has now on hand, ready to mail, 500 young, long-tongued Red Clover Queens, Golden or Leather Colored.

We have one of Root's best breeders from his \$200, long-tongued, Red Clover Queen, and a Golden Breeder which we are told is worth \$100, if there is a queen in the U. S. worth that sum.

J. L. Gandy, of Humboldt, Nebr., tells us that the colony having one of our queens, stored over 400 pounds (mostly comb) honey in a single season. A. I. Root's folks say that our queens are extra fine, while the editor of the American Bee Journal tells us that he has good reports from our stock from time to time.

We have years of experience in mailing and rearing Queens. Queens positively by return mail from now on. Prices for balance of season as follows:

	1	6	12
Selected .....	\$.75	\$4.00	\$7.00
Tested .....	1.00	5.00	9.00
Selected tested .....	1.50	8.00	

Extra selected tested, the best that money can buy, 3.00

## H. G. QUIRIN, Parkertown, Ohio.

(Parkertown is a Money-Order Office.)

27D6t Please mention the Bee Journal.

## QUEENS

Now ready to supply by returned mail. STOCK which can not be EXCELLED!!! Bred under the SUPERSEDING CONDITION of the colony.

GOLDEN ITALIANS, the GREAT HONEY-GATHERERS. They have no SUPERIOR and few equal. 75c each; 6 for \$4.00.

RED CLOVER QUEENS, the LONG-TONGUED ITALIANS, which left all RECORDS behind in GATHERING HONEY, \$1 each; 6 for \$5. SAFE ARRIVAL GUARANTEED.

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27A13t Please mention the Bee Journal.



try to work in such bad weather as the Italians do, consequently they do not dwindle so in the spring, and they rear more brood late in the fall.

In the second place, they will enter a super more readily than the Italians.

In the third place, they cap their honey white, and I believe they build their comb just as clean and straight as any bees.

Fourthly, they are much easier to shake off of extracting-combs.

I commenced buying Italian queens four years ago, and have bought about two dozen in all from that time until now, have only one of the lot left alive to-day, and she is a complete failure. They have had as good a show as the blacks in every respect, and were bought from different breeders, all the way from Texas to the State of Michigan.

If any queen-breeders take exception to this, all right; but I am through buying Italian queens.

GEO. B. WHITCOMB.  
Linn Co., Oreg., June 13.

### Experiences of a Beginner.

Last fall I went to an auction sale where there were a few colonies of bees for sale, and bought one colony for the small sum of \$1.00. I wintered them in the cellar with another colony which we got in the woods, keeping the temperature at about 55 degrees.

This spring I went to a bee sale where there were about 45 colonies to be disposed of. I bought the first five at \$2.00 each, but when I got them home the next morning I found I had only four colonies and one empty hive.

They are doing very nicely now, and have thrown off five swarms, which we managed to live in good condition. The first swarm issued June 5.

White clover has been in full bloom for about a week, and red clover is doing well.

I like the American Bee Journal very much.

JOHN B. CALDOW.  
Winneshiek Co., Iowa, June 17.

### Outlook for a Fair Honey Crop.

Last March we moved our bees from Fond du Lac County to Richland County, there being but little bee-pasturage in the former county, and the locality was also overstocked, consequently they have had but two fair honey crops in the past 10 years.

There is a good outlook for a fair crop of honey in Richland County. It has been quite cool all spring, and colonies did not build up very fast, but we are having warm days and nights now, with a little rain about once a week, and there is more clover bloom than there has been in the past two years. Brood-chambers are filled with honey, and the bees are working in the supers. Practically all bee-keepers here are working for extracted honey, we being the only ones working exclusively for comb honey.

ALBERT REIS.  
Richland Co., Wis., June 18.

### Good Report from Michigan.

Michigan is to the front again with a large honey-yield. Last year my colonies averaged 120 sections each of comb, and 15 pounds each of extracted honey—the finest I have ever tasted. And now, notwithstanding the late spring, it bids fair to outrank last year.

I did not remove the winter packing until June 1, on account of the cold weather. The bees had a hard struggle to feed the young brood up to that time. June 3 they cast their first swarm—one day earlier than last year. In just one week this young swarm had seven brood-frames filled with honey and brood, and that without comb foundation being furnished them. To-day they have 11 brood-frames filled, and 30 one-pound sections. The old colony cast the second swarm—larger than the first—on June 13, and has filled 36 one-pound sections besides. My largest colony—that is, it seems to be the most populous—has not swarmed in two years, but it has filled 76 one-pound sections since June 3, and I will put 74 more on to-morrow. I do not know where they procure the honey, as I have not had time to investigate. There is

## THOSE Long-Tongue Adels

BEAVER, PA., April 4, 1901.

From one 3-frame nucleus you sent me I took 213½ pounds of extracted honey.

WM. S. BARCLAY.

Each Queen, \$1.00.

Essay, "How Not to Rear Queens," sent free.

24A4t HENRY ALLEY, Wenham, Mass.  
Please mention Bee Journal when writing



### Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at \$1.00; or for \$1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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Chicago, ILL.

### I am Now Prepared

to fill orders promptly for Untested Queens reared from a breeder of the HUTCHINSON SUPERIOR STOCK, or a select GOLDEN breeder, and mated to Golden drones, at 75 cents each; \$4.00 for 6, or, \$7.50 per dozen.

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W. H. PRIDGEN,

22Attf Creek, Warren Co., N. C.  
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Alta Sita, E. St. Louis, Ill.

6A26t Mention the American Bee Journal.

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FOR 23 YEARS THE BEST ON EARTH.  
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11A26t J. D. GIVENS, LISBON, TEX.

Please mention Bee Journal when writing.

white clover in abundance, but I have failed to see the first bee on its blossoms this year.

I am not using comb foundation this season, but have a much better and cheaper device, which I will describe later.

D. H. METCALF.

Calhoun Co. Mich., June 17.

### Weather Hard on the Bees.

I had 18 colonies of bees, spring count, but two of them were very weak, and have since died.

The weather this spring has been the most unfavorable for many years. April came in cold, rainy and cloudy, with only 53 hours of sunshine the whole month. May was a little better, there being only 67 hours of sunshine, and very cold. Apple-bloom first appeared May 21, and May 23 it commenced to rain, and continued cold and rainy, the bees having only one day in which to work on it. The weather has been very fine for the past two weeks, and although I can not see from what source they are gathering, they are storing honey very fast.

I have had only five swarms so far this season, but they are working hard, having just started in the sections.

Basswood is very scarce here, but there are hundreds of acres of raspberry and white clover; also goldenrod in great quantities.

I find many useful hints in the Bee Journal.

F. R. WEBSTER.

Cheshire Co., N. H., June 14.

### Bees Working on White Clover.

There is an abundance of white clover, and bees are doing fine. We have had only one swarm, but have divided four colonies.

Some of the colonies have the third super nearly full of honey.

C. A. FAIRBANKS.

Jones Co., Iowa, June 17.

### Bees Rolling in the Honey.

My bees are just rolling in the honey now, and it keeps me busy with new swarms. I have 70 colonies in all.

D. E. LANE.

Washtenaw Co., Mich., June 16.

### Do Bees Select Their Future Home Before Swarming?

We are all interested in anything pertaining to the habits of our bees, even if it does not have a commercial aspect; and any one having a new fact, or who can explain an old one, is contributing something of value to natural history. Hence, the question of bees selecting their future home before swarming is not altogether without interest. Prof. Cook thinks they always do, and mentions having seen scouts investigating a cornice on a building, and the next day a swarm took possession.

I had the temerity to question the statement that they always select their home before swarming; Mr. O. B. Griffin, of Maine, on page 141, thinks that, "in the majority of cases," they do not. And now comes Mr. D. H. Metcalf, of Michigan, who thinks (page 157) that "first swarms always do—second swarms never," and mentions two instances of seeing "scouts" (as I, being an old soldier, call them) investigating a bee-tree, and one where the swarm actually came and would have taken possession only he had felled the tree. This looks pretty solid, on the face of it, for the affirmative side of the question, and yet it is only what the lawyers would call "prima facie," or first-view, evidence. If Mr. Metcalf had seen the swarm issue, and followed it up to the bee-tree, the chain of evidence would be more complete; but I would ask in this case, as I did in the one mentioned by Prof. Cook, Have you any evidence to show that the swarm was not already clustered somewhere at the time the scouts were seen? This will cover the whole point of contention.

I would like to ask the fundamental question, Why does a swarm cluster at all? There would be no need of it if they had already selected their home. Prof. Cook says, "To rest the queen." I can't think the Professor was serious when he made that statement, for if bees have as much sense as they



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### Tennessee Queens!

Fine lot of Choice Tested Queens reared last season, daughters of select imported and select golden queens, reared 3 1/4 miles apart, and mated to select drones, \$1.50 each; untested warranted Queens, from same breeders, either strain, 75c each. No bees owned nearer than 2 1/2 miles. None impure within 3, and but few within 5 miles. 28 years' experience. Discount on large orders. Discount with dealers a specialty. JOHN M. DAVIS, Spring Hill, Tenn.

6A26t

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## Standard Bred Queens.

Acme of Perfection.  
Not a Hybrid Among Them.

IMPROVED STRAIN GOLDEN ITALIANS.

World-wide reputation. 75 cts. each; 6 for \$4.00.  
**Long-Tongued 3-Banded Italians**  
bred from stock whose tongues measured 25-100 inch. These are the red clover hustlers of America.

\$1.00 each, or 6 for \$5.00. Safe arrival guaranteed.

FRED W. MUTH & CO.,  
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S.W. Cor. Front and Walnut Sts.,  
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## Marshfield Manufacturing Company.

Our Specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

8A26t

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## Red Clover Queens

LONG-TONGUED BEES ARE DEMANDED NOW.



ONE Untested Italian Queen FREE as a Premium for sending us TWO new subscribers to the American Bee Journal for one year (with \$2); or, one Tested Queen free as a premium for sending us FOUR new subscribers with \$4.00).

We have arranged with one of the oldest and best queen-breeders (having many years' experience) to rear queens for us the coming season. His bees average quite a good deal the longest tongues of any yet measured. The Breeder he will use is direct from Italy, having imported her himself. Her worker-bees are large, somewhat leather-colored, very gentle, and scarcely requiring veil or smoke. They stored red clover honey last season.

All queens guaranteed to arrive in good condition, and all will be clipped, unless otherwise ordered.

CASH PRICES of these fine queens will be as follows: Untested, \$1.00 each; Tested, \$2.00 each. Send all orders to

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are usually credited with, they would certainly know that a flight from the hive even to the top of a tall tree (possibly from 100 to 300 feet) would not tire an old queen with perfect wings. If swarming bees or queens ever do get tired it is more reasonable to suppose it would be after they had started on their journey to a home, and maybe they do; but to "stop to rest before they are tired?"—well, I can't see the sense in it.

In conclusion, I do not think bees select their future home before swarming, for the following reasons:

First, 90 percent of all swarms cluster a certain or uncertain time before leaving. We have no definite information on the subject, as most observed swarms are hived as soon as possible by the bee-keeper; but in most cases it is from one hour up to 72. Bees fly very rapidly—I think I am within the limit when I say a mile in three minutes. There is ample time for a thousand scouts to explore and report every possible bee-tree within five miles of the cluster inside of an hour. Second, the uncertainty of the time in clustering indicates to my mind the greater difficulty in one case over another, in finding the future home, and the greater probability that they, like some human beings, do not cross a bridge until they come to it, or do not select a home until there is strong need of it.

This is my view of it. But I'll change my mind any time the weight of evidence is the other way.

RIP VAN WINKLE.

Cook Co., Ill.



### Drone-Traps.

W. H. Pridgen says in the American Bee-keeper:

In using the combined queen and drone trap on hives that are sending out objectionable drones, I usually have trouble in separating the queen from the drones in case a swarm issues, without allowing the escape of many drones. This can be overcome by a double or combined trap. There should be a division made of drone-excluding zinc through which the queen can freely pass, with an additional trap with ordinary cone above, to catch the queen. That is, to separate the queen from the drones, we want two traps, one above the other, with the slide in the top of the drone-trap, with perforations large enough for the queen to pass through without allowing the drones to do so.

### Cost of Drone-Comb.

Probably the majority of bee-keepers discourage the presence of much drone-comb. Just as probably the majority have a good deal more drone-comb than is profitable. The bee-keeper who has supplied his bees with full sheets of worker foundation is not safe for all future time. Here and there a mouse will nibble a hole in a comb in winter, and by one means and another there will be holes that the bees must fill in, which holes will almost invariably be filled with drone-comb. If no attention is paid to the matter this will increase from year to year, but the bee-keeper perhaps gives it little thought. If his attention is called to it, he will say, "Yes, there is some drone-comb in most of my hives that have comb of any age, but it doesn't amount to much. There isn't an average in each hive of more than enough to fill a pound section."

Let us figure up the cost of a piece of drone-comb of that size—4 inches square, or 16 square inches. Counting 18 cells to the square inch, or 36 for the two sides, 16 square inches will contain 576 drone-cells. Suppose only one brood of drones is reared, and that each drone lives 60 days; what will be the cost of those 576 drones? Taking the estimate that it costs .0141 ounce of honey to rear a drone, and that it consumes .00635 ounce of honey daily, it will consume in 60 days .381 ounce of honey, which, added to the cost of rearing,



makes .3951 ounce of honey that each drone costs. Multiply this by 576, and you have 227.5776 ounces, or 14.2236 pounds of honey that it has cost to rear and support the drones from that piece of comb the size of a pound section.

"But," you say, "I don't stand all that expense, for I slice off the heads of the sealed brood every time I go over them, so I stand only the trifle that it costs to rear them."

Suppose we figure on that. Multiply .0141 by 576, and you have 8.1216 ounces of honey that each slicing has cost you. Remember that this cost has occurred before the cells are sealed; and as fast as you slice off the heads of the brood a fresh lot will be started so long as there is a moderate degree of storing. Suppose you begin slicing June 1, and slice every two weeks, making the last slicing July 13. That will make four times, costing you a trifle more than two pounds. Don't you believe you could go over 25 colonies in a day, cutting out the drone-comb and putting patches of worker-comb in place thereof? That would give you a payment of 50 pounds of honey for the day's work, to say nothing of the saving in future years. *Cut out the drone-comb.*—Gleanings in Bee-Culture.

#### A New Bee-Keeping El Dorado.

It is in Arkansas, and L. E. Kerr says in the American Bee-Keeper:

The flow begins here the first of April and continues till November. It is not spasmodic, but comes in a slow, steady stream for about seven months, enabling a wide-awake bee-keeper to secure from 100 to 300 pounds of comb honey, of first-class quality, as an average yield per colony.

With a honey-flow lasting seven months many would naturally suppose that the matter of keeping the colonies in shape to do the best work would be no little item; but really all we have to do is to keep good queens and let them alone, and they remain strong themselves, with no swarming except during April and May.

Editor Hill comments as follows:

"From 100 to 300 pounds of comb honey of first-class quality, as an average yield per colony," is truly wonderful. In this day of small yields, it is refreshing to read of such a locality. Mr. Kerr's idea, as to the superior finish and quality of comb honey where the bees have seven months to devote to the work, is something entirely new and quite at variance with the experience of nearly, if not quite, all experienced producers of comb honey. We should decidedly prefer a location where all the finish and trimmings were applied in ten days. It is a magnificent theory, indeed; but we have never learned to admire "a slow, steady stream," when "first-class" comb honey was the object.

#### Long Tongues and Their Value.

Dr. Miller thinks long tongues may be of value for other blossoms than those of red clover, but that longest tongues are not necessarily best in all cases. He says in Gleanings in Bee-Culture:

Why should it be considered a strange thing that other flowers should have tubes of the same depth as red clover? It is possible that many of the flowers commonly visited for nectar have tubes of different lengths, some of them accessible only to tongues of unusual length, thus giving long tongues the advantage aside from red clover. Again, a flower-tube may be of such depth that only part of its contents can be reached by a tongue of ordinary length, while one a little longer may drain it to the bottom.

Please don't understand that I believe that length of tongue is the only thing to be considered. I should prefer to make selection by noting the amount of stores gathered rather than by measuring tongues. It is possible that, among several colonies, the one with longest tongues may be the poorest. One colony may excel it because of greater diligence. Another may work earlier in the day. Another may excel because of greater longevity. So

I think it would have been unwise to depend upon tongue-length alone. But I do insist that the advantage of long tongues has not been proven to be exclusively associated with red clover; and it is possible—not probable, I think—that the gain from other flowers with long tubes may be even greater than from red clover.

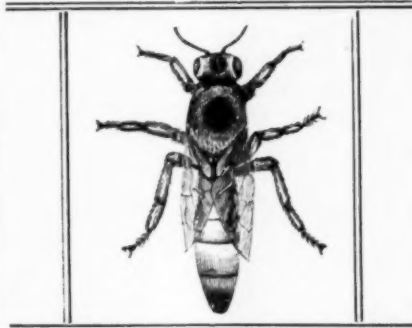
#### Straining Extracted Honey.

Elias Fox gives his plan in Gleanings in Bee-Culture as follows:

I have six large barrels, holding about 600 pounds each, arranged around my extracting-room on a strong bench, with heads out, and molasses-gates near the bottom. Each barrel is supplied with a fine cheese-cloth strainer tied securely over the head. I draw the honey from the extractor into an ordinary water-pail, and transmit to these barrels through the strainers. This takes out the minutest specks. It is left in these barrels from one to six weeks (according to the time in the season of extracting), when it is drawn off into 60-pound cans, caps screwed down tight, and placed in cases, and securely nailed, ready for shipment. I have practiced this method for the past 18 years, and have never had a word of fault found.

### UNTESTED Italian Queens Free BY RETURN MAIL.

For sending us One New Subscriber for one year, to the American Bee Journal, with \$1.00, we will send, by return mail, a fine Untested Italian Queen free as a premium. This offer



is made only to our present regular subscribers.

We will mail one of the above queens alone for 75 cents; or 3 for \$2.10.

Please do not conflict the above offer with the one on another page which refers to Red Clover Queens. For sending us two new subscribers, and \$2.00, we will mail free as a premium an Untested Red Clover Italian Queen.

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Please mention Bee Journal when writing.

### HONEY AND BEESWAX MARKET QUOTATIONS.

CHICAGO, June 19.—New comb honey has not yet reached this market. It would sell at 15¢ 16¢ if choice white, and the ambers at 12¢ 13¢. The market is entirely bare with exception of a few cases of a lot that we had held for us, expecting it would be needed. Advices are that shipments will be started by July 1. Very little trading is being done in extracted, as large dealers will not contract this season unless at low figures; some sales of amber have been made at 4½¢ 5¢ for early autumn delivery; white is held at 5½¢. Beeswax sells at 30¢.  
**R. A. BURNETT & CO.**

CINCINNATI, May 17.—No demand for comb honey, also stock of it well exhausted. Extracted very dull; sales are more or less forced; lower prices from ½¢ to 1 cent per pound.  
**C. H. W. WEBER.**

BOSTON, June 14.—There is practically no comb honey in our market, and owing to warm weather very little call for it. Are expecting some new comb early next month. Market for extracted dull, at 6½¢ 7¢.  
**BLAKE, SCOTT & LEE.**

OMAHA, May 1.—Comb honey, extra white, 24-frame cases, per case, \$3.40; No. 1, \$3.25; amber, \$3.00.  
**PEYCKE BROS.**

NEW YORK, June 1.—Extracted honey is exceedingly dull and very little moving. We quote for the present: White, 6½¢ 7¢; light amber, 5½¢ 6¢; amber, 5¢ 5½¢. Some demand for comb honey at unchanged prices. New crop is now beginning to arrive from the South, and sells at from 12¢ 15¢, according to quality and style. Beeswax, 29¢.  
**HILDRETH & SEGELKEN.**

ALBANY, N. Y., June 18.—Honey market is dull with no receipts or stocks and little demand. It is between seasons now. Prospect of good crop in this vicinity from what bees there are left, the greater portion having been killed by foul brood exterminators. **H. R. WRIGHT.**

DETROIT, June 24.—Very few sales of honey, but prices are well sustained on good lots. The new crop will start out at good prices, and with little old honey to interfere. Beeswax in fair demand at 27¢ 28¢.  
**M. H. HUNT & SON.**

BUFFALO, June 26.—Honey not wanted till cool, fall weather. Little old honey here and dragging, 6¢ 10¢. Extracted not wanted. Fruit takes place of honey now. **BATTERSON & CO.**

KANSAS CITY, June 14.—Very little old honey on our market but what is damaged by being granulated. Sales are light at 15 cents for best grade No. 1 Colorado. Amber, 13¢. Beeswax firm at 25¢ 30¢.  
**W. R. CROMWELL PRODUCE CO.,**  
Successors to C. C. Clemons & Co.

SAN FRANCISCO, June 5.—White comb, 11½¢ 12½¢; amber, 9¢ 10¢; dark, 6¢ 8¢. Extracted, white, 5¢ 6¢; light amber, 4¢ 4½¢; amber, 3½¢ 4¢. Beeswax, 26¢ 28¢.

Dealers are very bullish in their ideas, but are not securing much honey at the prices they name. In a small way to special trade an advance on quotations is being realized.

### At the Pan-American

I can accommodate five or six persons who wish to attend the Pan-American Exposition. Rates reasonable. Good car service half a block away. If any wish to engage rooms in advance, address,  
**M. RICKARD,**

254 Dodge Street, BUFFALO, N. Y.

[Mr. Rickard is a bee-keeper, and will take good care of his patrons.—EDITOR.]

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One Untested Queen ..... \$ .60  
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One Breeder ..... 1.50  
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the BEE JOURNAL that  
**DOOLITTLE...**

has concluded to sell  
QUEENS in their season  
during 1901, at the fol-  
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1 Untested Queen .. \$1.00  
3 Untested Queens.. 2.25  
1 Tested Queen ..... 1.25  
3 Tested Queens.... 3.00  
1 select tested queen 1.50  
3 " " Queens 4.00  
Select Tested Queen,  
last year's rearing, 2.50  
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ing, the very best.. 5.00

Circular free, giving particulars regarding  
each class of Queens, conditions, etc. Address,

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Very fine pure-bred **BARRED PLYMOUTH ROCK** Chickens and Eggs  
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**Langstroth on the Honey-Bee—Revised,**  
The classic in Bee-Culture—Price, \$1.25, by mail.

Beeswax wanted at all times.

**CHAS. DADANT & SON, Hamilton, Hancock Co., Ill.**

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### A Bee-Keeper's Paradise.

*En route to El Paso.*—I have just come from a county about  
40 miles square that has more bee-keepers to the square mile than  
any other locality of its size I ever visited. The inhabitants talk  
bees at the hotels, on the streets, and everywhere, just as farm-  
ers talk crops and business in the North. This county produces  
more honey than any equal area, I believe, in the United States.  
Some say that its yearly output is a *whole trainload of honey*; but  
many aver that this is too low, and that two whole trainloads  
would come nearer the truth. Of course this great amount doesn't  
go all in one lot, but in large and small shipments.

The average per colony is high, and there is a honey crop  
every season. It is estimated that in this one county, outside of  
the towns, nearly one-half the population are bee-keepers.

The great bulk of the honey is of the very finest, and some of  
it is literally water-white. There are thousands and thousands  
of acres of honey-plants on cheap land; and bees—there are not  
enough to gather it all.

The bees commence swarming early in the spring; and, *when  
the main honey-flows commence, actually stop swarming*, destroy  
cells, kill off the drones, and commence business. Did you ever  
hear the like of it before? You say, "No, and no one else."  
Well, I think I can prove every statement; but for the present I  
am not at liberty to give the place or other details; but very  
shortly I'll tell the whole story, with some fine pictures.

This is only one of the good things in store for readers of  
Gleanings in Bee-Culture. Send 15 cents for three months' trial  
or 25 cents for six months' trial, or \$1.00 for one year and one un-  
tested Italian Queen. Send \$2.00 and we will send Gleanings one  
year and one of our Red Clover Queens. Speak quick if you want  
one.

**THE A. I. ROOT CO., Medina, Ohio.**  
(U. S. A.)

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are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO.  
Send to them for their free Catalog.